

Title (en)
Apparatus and method for digitally controlling capacitance

Title (de)
Vorrichtung und Verfahren zur digitalen Kapazitätssteuerung

Title (fr)
Procédé et appareil pour contrôler la capacité numériquement

Publication
EP 2403134 A3 20150701 (EN)

Application
EP 10189160 A 20101028

Priority
US 82148910 A 20100623

Abstract (en)
[origin: EP2403134A2] An oscillator circuit having a source of an oscillating signal, a tank circuit including an inductor (18, 420, 421) and a capacitor (18, 420, 421), and a discretely switchable capacitance module (14, 314) configured to control an amount of capacitance in the oscillator circuit. The discretely switchable capacitance module (14, 314) includes, a capacitor (22, 322) coupled between a first node (41, 341) and a second node (42, 342), a switch (24, 320) coupled between the second node (42, 322) and a third node (43, 343); and a DC feed circuit (28, 328, 329), having a first end (28a, 328a, 329a) coupled to the second node (42) and a second end (28b, 328b, 329b) configured to receive a first or second control signal (30, 330). The control node (25, 325) of the switch (24, 320) is tied to a predetermined bias voltage (26, 326). When the first control signal (30, 330) is applied, the capacitor (22) is coupled between the first node (41, 341) and the third node (43, 343) via the switch (24, 320), and when the second control signal (30, 330) is applied the capacitor (22) is decoupled from the inductor (18, 420, 421).

IPC 8 full level
H03B 5/12 (2006.01); **H03J 5/02** (2006.01); **H03K 17/693** (2006.01)

CPC (source: EP US)
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H03B 2201/0266 (2013.01 - EP US); **H03J 2200/10** (2013.01 - EP US)

Citation (search report)

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Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
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EP 2403134 A2 20120104; **EP 2403134 A3 20150701**; **EP 2403134 B1 20210127**; CN 102299682 A 20111228; CN 102299682 B 20140326;
TW 201201506 A 20120101; TW 1485975 B 20150521; US 2011319036 A1 20111229; US 8275336 B2 20120925

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EP 10189160 A 20101028; CN 201110081015 A 20110325; TW 99145743 A 20101224; US 82148910 A 20100623